

Toulon is directed to a golf club head having a grooved hosel. The groove allows the hosel to be bent through narrow angles to adjust the lie and loft of the club head.

Duclos is directed to a measurement device for determining the loft and lie of a club as it is held in address position by a golfer. Variances between the desired loft and lie and the actual lie and loft can be corrected either by correcting the stance of the golfer or by bending the hosel of the golf club slightly.

Hansen is directed to a device for locating a ball position for clubs of varying lengths. The ball position moves progressively rearwardly as the club length decreases.

Schmoll is directed to an automated system for determining the lie angle with which a golfer strikes a ball. A camera records the lie angle at impact, and other cameras may also be used to determine amounts of hook or slice and hand positions.

Douglass is directed to a device for training the golf swing by focusing the eyes of the golfer along a predetermined swing path. The same device may be used for multiple clubs without a change in the indicated swing path and ball position. The loft of the club is not considered.

Rejections under 35 U.S.C. § 112

Claims 2-3, 5-10, 12, and 14-16 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite. Applicant has amended claims 2 and 9 as suggested by the Examiner to correct lack of antecedent basis, and believes that this amendment should fully overcome the rejections of claims 2-3 and 5-8.

Claims 9-10, 12, and 14-16 were further deemed indefinite because they "claim a plurality of clubs with structure relating to a plurality of clubs ... yet the claim which they depend on claims a club." Applicant respectfully points out that none of these claims actually claim clubs; all pertain to methods of club construction. While claim 1 claims a method of constructing a single club, claim 9 creates the additional limitation that the method is repeated for a plurality of clubs. Since claim 1 uses the open-ended form "comprising," it is proper for additional steps to be added to the method in claim 9.

disagree
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Applicant submits that the claims as presently pending are definite, and requests that all rejections under 35 U.S.C. § 112 be withdrawn.

Rejections under 35 U.S.C. § 102(b)

Claim 1 stands rejected under 35 U.S.C. § 102(b) as anticipated by each of Toulon, Duclos, and Muldoon.

As amended, claim 1 recites steps of separately determining a design loft and a lean angle that produces a desired effective loft, and constructing a club having the determined design loft and lean angle, and hence the desired effective loft. Each of Toulon, Duclos, and Muldoon teaches bending a club at the hosel to adjust loft. When bending an existing club, design loft remains unchanged, since it is measured relative to the sole of the club. According to the invention, design loft and effective loft are separately adjusted in the original construction of the club. Since none of the cited references contemplates *separately* selecting both effective loft (via lean angle) and design loft, they do not anticipate claim 1. Applicant therefore requests that the rejections under 35 U.S.C. § 102 be withdrawn. *design*

Rejections under 35 U.S.C. § 103(a)

Claims 2-3, 9-10, and 14-20 stand rejected under 35 U.S.C. § 103(a) as obvious over Muldoon in view of Hansen. Claims 5-8 stand rejected under 35 U.S.C. § 103(a) as obvious over Muldoon in view of Hansen and Schmoll, while claim 12 stands rejected under the same statute as obvious over Muldoon in view of Hansen and Douglass.

Claims 2, 3, 5-10, 12, 14-16, and 20

As discussed in the previous section, Muldoon does not separately select a desired loft and effective loft (lean angle) for the same club, as recited in claims 2, 3, 5-10, 12, and 14-16 (all of which depend from claim 1), and in independent claim 20. This deficiency is not remedied by Hansen, Schmoll, or Douglass, none of which address loft or lean angle at all. Since Muldoon does not contemplate constructing appropriate clubs for a golfer (rather than bending existing clubs in an attempt to “fit” them to the golfer), it does not render these claims obvious.

The Examiner relies on Hansen to teach using the length of a club to select a lean angle, by determining an angle that will allow the ball position to be adjusted while keeping grip position at impact constant. Applicant submits that this interpretation represents an impermissible hindsight reconstruction, in that none of the cited references suggest that it is desirable to maintain a constant grip position for different clubs. Further, Hansen is not even

compatible with the idea of maintaining a constant grip position, since it discloses that the ball position moves progressively rearwardly as club length decreases. In contrast, according to the invention, grip position can be maintained constant by adjusting the lean angle if the ball position moves progressively rearwardly as club length increases, as recited in claim 12. The Examiner has improperly imported this teaching of the present invention into the prior art to construct the rejection.

Golfers may have optimum lean angles of 10-15° or more. Bending a club head, as suggested by Muldoon, through such a large angle is a difficult process, which frequently results in fracture at the hosel of the club. Such bending can only be achieved at all when using clubs with metal heads, and even with metal clubs, the hosel may be significantly weakened by the bending process. Clubs that use advanced composite and resin materials cannot be bent at all. In contrast, the present invention allows clubs to be constructed with substantial lean angles without bending, avoiding these shortcomings.

Further, the device described by Muldoon for holding clubs is designed for nonlofted clubs, since stop 64, which is held in contact with the club face during bending, has a substantially vertical face. Typically, only putters lack any design loft. According to claims 1-16 of the present application, the invention is a method of constructing a wood, iron, or wedge.

Claims 17-19

Claims 17-19 pertain to the design of sets of clubs for a golfer. Like the claims of the preceding section, they recite that for each club, design loft and lean angle are separately determined so that the golfer will achieve the desired effective loft for each club. Further, none of the cited references teach adjusting a set of clubs for a golfer in such a way that the lean angle varies with the club length, as recited in these claims.

Claim 12

The Examiner relies on Douglass to teach moving ball position progressively rearwardly as club length increases, as recited in claim 12. In fact, according to the teachings of Douglass, ball position does not change at all for different clubs, but remains at tee slot 102d (col. 6, lines 16-17). Holes 102g, which are positioned according to club type, are used to place a flexible member that gives audible feedback as to whether the club has followed the correct swing path

(col. 6, lines 33-37). None of the cited references suggests moving a ball progressively rearwardly as club length increases.

As discussed in this section, the cited references do not render claims 2-10, 12, and 14-20 obvious. It is therefore requested that the rejections under 35 U.S.C. § 103 be withdrawn.

In light of the foregoing Amendment and Remarks, Applicant respectfully submits that the present case is in condition for allowance. A Notice to that effect is respectfully requested.

A copy of the Patent Application Fee Determination Record for this application is included with this filing. Please charge the additional claim fee of \$207, as well as any other fees associated with this filing, or apply any credits, to our Deposit Account No. 03-1721.

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